

DANGER Polar Bear!

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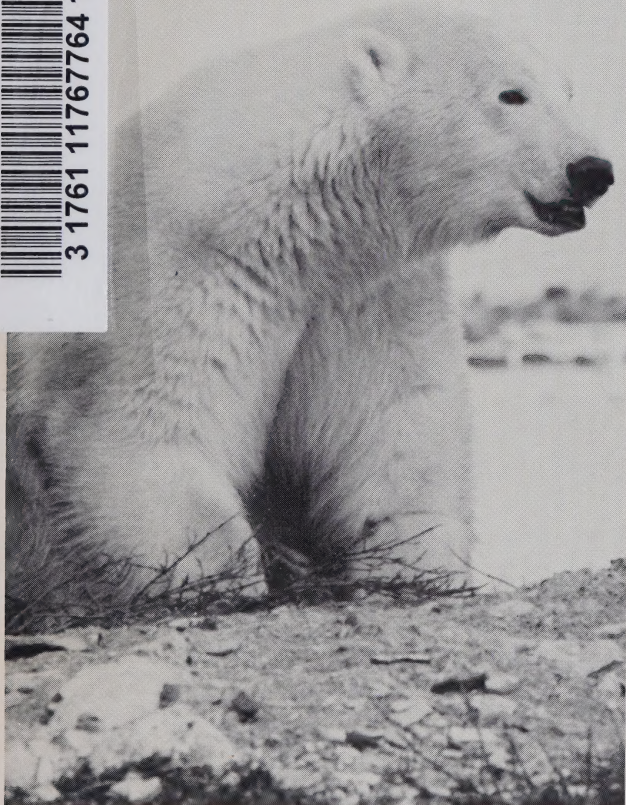


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DANGER **Polar Bear!**

Thomas G. Smith
Arctic Biological Station
P.O. Box 400
Ste Anne de Bellevue, Québec
H9X 3L6

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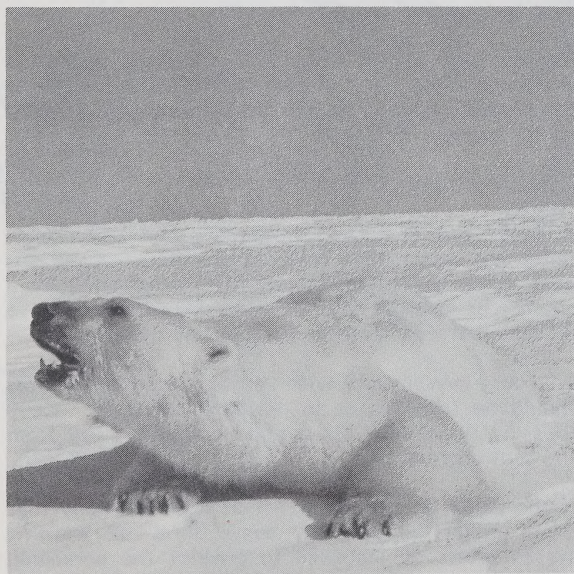
(aussi disponible en français)

INTRODUCTION

The staff of the Arctic Biological Station travel, work and live in areas where polar bears are common and abundant. Those of us who work on the sea ice, especially when conducting research on marine mammals, are particularly exposed to the chance of encountering bears.

This handbook has been developed from my own experience of winter and spring travel on land-fast ice over the last 10 years. Several other agencies such as the Canadian Wildlife Service, Northwest Territories Game Branch and the Polar Continental Shelf Project have contributed materially to the ideas in this presentation.

The purpose of this booklet is to provide detailed instructions on how to avoid contact with bears and how to behave if confronted. Most of the common situations that will be encountered by either permanent camps or small mobile parties are covered. Polar bears are unpredictable and a real danger. The best strategy is to avoid accidental contact and to prevent attracting them. If you must live and travel in their hunting habitat, use common sense and be prepared.



TYPES OF FIELD CAMPS: THE DO'S AND DON'TS

There are four types of situations in which the staff of this laboratory are likely to find themselves in the course of their fieldwork, and specific recommendations concerning prevention and protection for each follow.

Permanent camps with plywood or frame type buildings

The odors from garbage, human waste, food and carcasses will attract bears. Keep all garbage in closed plastic bags and burn frequently. Field latrines should be established, human waste covered with lime and earth frequently. Food should be kept in metal drums with removable tops. Both the latrine and garbage dump should be visible from the camp building.

Permanent buildings, such as plywood prefabricated houses and Parcol units, should have windows that permit a clear view of the outside near exit doors. There should be some means of illuminating this area during the dark hours.

Look for bears before leaving the building, especially at night or when bears or bear tracks have been seen in the area. If at all possible, have a second door in the building that can be used should a bear be 'camped' on your doorstep.

Keep a fully loaded firearm in a canvas case at a sheltered area near the door in the porch but not in the heated building. Make sure everyone knows how to use it and where it is.

Small tent camps (nonmobile parties)

Keep the tent camp to a minimum size. A few large tents are better than many small tents. A curious bear might feel threatened when surrounded by a number of strange objects. A small camp may give a bear a better chance to back out of the situation.

The same precautions with garbage, food and wastes should be followed as in permanent camps. Keep these in plain view but a good distance away from the tent entrance.

If the camp is situated where it is at all likely that bears might be present, some form of warning system must be installed to protect the personnel while they are sleeping. Dogs (a minimum of two), which are *known* to be alert and aggressive, are

good sentinels. It must be emphasized that the dogs be experienced and proven; they must of course be kept outside the tents at all times, and the personnel must take notice of *any* warning given by them. If no dogs are available, there are several devices (some military, others which can be adapted from commercially available equipment) that can be used as a trip-wire warning system.

Keep a loaded rifle or shotgun in a canvas case just outside the front flap of the tent. The butt can project under the door for ease of access.

Mobile camps (overnight)

The same preventative measures outlined above apply. Try to avoid leaving garbage and human wastes near the camp until you are ready to abandon it. If you can't, burn or bag anything that might attract bears. Installing complicated warning devices here is not usually practical. A crude type of trip-line (Fig. 1) attached to several items of

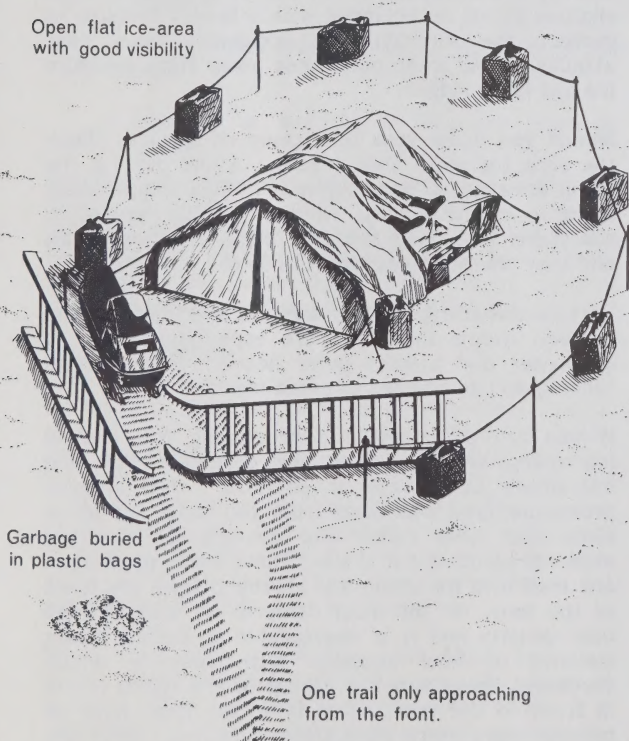


Figure 1. Mobile camp layout

equipment around the tent is useful. Place sleds and skidoos around the front of the tent to stop bears from preventing a quick exit and access to your firearms. If you have to, get hold of your weapon and crawl out under the rear of the tent. Keep the firearm outside the tent but immediately accessible from the inside. During the dark winter period a good flashlight should be kept nearby. In very cold weather it can be kept warm in your sleeping bag. Dogs again are very useful as sentinels but are usually inconvenient for mobile parties.

Special circumstances – mobile camps on sea ice, marine mammal hunting, helicopters on sea ice!

The sea ice is the hunting habitat of polar bears. They are specialists in camouflage and travel in this habitat. If your work brings you into the bear's hunting territory, there are certain things that you should do in order to prevent bear encounters and to protect yourself.

Helicopters that land on sea ice and shut down their engines should be equipped with a loaded firearm to protect the aircraft and occupants from bear attacks. Land in an open area away from pressure ice and large ridges.

Should you make your tent camp on sea ice, check the area for polar bear tracks. Avoid placing the camp area on a 'bear highway'. Bears hunt seals along pressure ridges, in the heavily pressured nearshore ice along the floe edge, near polynyas; and they travel across points of land.

Parties collecting marine mammal specimens should be well aware that they are especially likely to encounter and attract polar bears. Here special techniques can be used to avoid trouble.

If you are collecting and processing any marine mammals, avoid bringing the carcasses into the immediate camp area if possible. Set up your processing area well away from the camp and leave sleds that have come into contact with marine mammal blood or fat there. Don't make more than one trail into the camp and approach from the front of the tent. If you must camp in an area of high bear density and it is unavoidable to attract bears because of your dealings with seal or whale carcasses, make sure the carcasses are 300 to 400 m in front of the tent. This is an old Inuit trick of baiting bears away from the habitation. Don't use this method except in areas of high bear densities, or you might create more problems than you solve.

If you are walking through pressured areas of sea ice or along ridges, always be on the alert for sleeping or hunting bears. Don't travel without a firearm. Look around often and be observant of bear signs. Remember, you are a potential prey in this habitat. Bears have been known to stalk people. Be especially careful when examining marine mammals that have recently been killed. Bears often sleep near their kills and will defend them actively from scavengers.

BEAR DETERRENTS

Bears are inquisitive animals. Give them a chance. Try to scare them away. As a general rule don't attempt to scare a bear by approaching him on foot closer than 50 m and always carry a firearm with you. Bears that are frightened will usually stand sideways to you and begin to move away. You might be able to effectively scare a bear away by:

- firing a scaring device in such a way that the explosion occurs between you and the animal.
- firing a shot from the gun *to the side* of the bear.
- shouting or emitting a loud low grunt or growl.

Starting the engine of a skidoo will often move the bear away. If the bear is chased for several kilometres, he will be properly frightened and rarely will return to the camp. Stay at least 30 m behind the bear when doing this. Also always carry a firearm with you and do not shut off the motor.

KILLING A BEAR

It is usually possible to avoid killing a bear. Shoot to kill only as a last resort. Signs of bear's annoyance include: making a hissing sound; lowering his head while facing you; or a small rush four to ten paces in your direction, then stopping. At or before any of these signs, there is usually still time for you to back out of the situation. If you encounter bear cubs, make sure that you position yourself so as not to separate the cubs from their mother.

When more than 50 m from the bear, back out slowly and face the bear at all times. At ranges of less than 50 m it is best to stand your ground. If it continues to make aggressive actions toward you and approaches to within 20 m, do not hesitate to shoot it.





A bear charges at remarkably high speed and usually low, crouched over the ground like a cat rushing a bird.

If killing is unavoidable, try for these shots: broadside - low neck region; frontal - low centre neck, between shoulders (Fig. 2). Don't try for a head shot unless you are certain of a hit. A shot in the main front shoulder area will usually break bones, stop the bear and give you a chance for the killing shot. Keep firing aimed shots until the animal is dead.

Contact the nearest Game Management Officer as soon as possible. If possible, record the sex and total length of the bear in a straight line from the tail to the nose. The skin should be removed before the carcass freezes, and the skull and reproductive organs taken. Stomach contents should be noted.

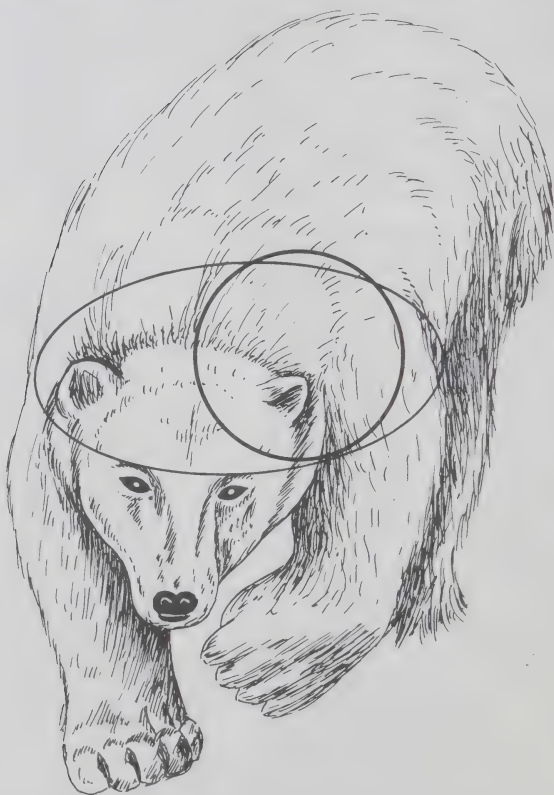


Figure 2. The ellipse defines the area to aim at when a bear charges

TYPES OF FIREARMS FOR PROTECTION FROM BEARS

Several types of firearms are suitable for protection against polar bears: bolt action rifles with open sights, of .3006 caliber or similar muzzle energy; 12 gauge pump action shotguns with iron sights, loaded with rifled slugs and buckshot; and revolvers of .375 magnum or larger caliber. For rifles and revolvers, a soft point bullet of 200 grains or heavier is recommended. Semiautomatic rifles, shotguns and pistols are not advisable because their mechanisms are less reliable in cold temperatures and drifting snow conditions. They are also generally more dangerous to handle.

All firearms should be thoroughly degreased by soaking the firing mechanism in a solvent such as naphtha. A small amount of low temperature lubricant such as Triflon or graphite can be put on the firing pin and trigger gear. When in the field, every firearm should be fired to see that it is functioning properly. In order to prevent misfires caused by condensation and icing, firearms should be left outside heated buildings in a loose fitting canvas case. They should be checked occasionally and kept free of drifting snow and icing. Before a weapon is used it is a good idea to see that the barrel is free of obstructions. A plastic or cellophane film covering the muzzle and held in place with an elastic band can help prevent a plugged barrel.

Recoil pads and carrying slings should be provided with all long weapons. Revolvers should be carried in belt holsters with a covering flap.

USE OF FIREARMS

Firearms in the camp should be kept loaded at all times. Rifles and shotguns should have full magazines and an empty breech with the firing mechanism in the fired state. Do not use the safety catch, in order to avoid confusion should an emergency situation arise. Most modern good quality revolvers (e.g., Smith and Wesson, Colt) can be safely carried with a live round under the hammer.

All personnel should be completely familiar with the various features of the firearms in their camp. These include the trigger, loading mechanism, safety catch, disconnecter and magazine. Certain bolt action rifles give loading problems when the shells are not properly placed in the magazine. Slide action shotguns jam during the loading

operation if a smooth action on the part of the operator is not performed. Handguns of the large caliber recommended here (.375 or .44 magnum) cannot be used effectively by personnel who do not have considerable previous experience. They are not recommended except in special circumstances when a long-arm cannot be carried.

All field party personnel should be trained in the use of a rifle or shotgun. This includes safety procedures, proper sighting, stance, absorbing recoil, recovery and reloading.

The following training outline with modifications to fit the circumstances can help you to train your field staff.

Dry firing

- (i) Targets (3 per position) at 20, 35 and 50 m in staggered line. Targets on 48 cm x 122 cm x 1.25 cm plywood on 5 cm x 5 cm x 168 cm stakes. Targets usually army 'snap' targets of charging man ca 46 cm x 112 cm.
- (ii) Familiarization with firearm – range procedure and safety, 'hands on', use of breech lock release, loading door, safety catch, operation of action.
- (iii) Dry firing – shooting stance for heavy recoil, sight picture, 'squeeze off', operation of action.

Firing practice

- (i) Single round – load one round and aim at near target (20 m), fire, eject. Three rounds fired this way, gun loaded with breech closed and (a) empty 'fired' condition, or (b) empty 'cocked' condition, use of breech lock release button or firing 'empty chamber' to overcome (b), examine and patch targets. (Treating each round separately embeds the procedures and experience more deeply than if three rounds are loaded at once and fired in succession.)
- (ii) Three rounds slow fire – load three rounds, fire one round at each of the three targets starting at rear and coming forward, time allowance 3 minutes, examine and patch targets.

- (iii) Three round timed fire — repeat of (ii) but "Fire" and "Cease Fire" commands by whistle, time allowance 15 seconds. (Simulates approach of walking bear.)
- (iv) Three rounds rapid fire — repeat of (iii) but time allowance is 7 seconds. (Simulates approach of running bear.)

FIREARM LICENSING AND TRANSPORTATION

No license is required to own long arms of a legal overall length of 66 cm with a barrel length no shorter than 45.7 cm. However, in order to acquire firearms, including borrowing firearms from your place of work, you must possess a current Firearms Acquisition Permit. This is valid for 5 years, costs \$10.00 and is obtainable from the municipal or provincial police.

Handgun licenses are extremely difficult to obtain, require an ironclad reason, and must be preceded by a security check of the individual applicant. They are issuable for each province or federal territory and renewable each year.

When travelling with firearms it is advisable to remove the firing mechanism, always check to see if they are unloaded and place them in your freight. Some provinces or territories request that you apply to the local authorities for a handgun conveyance permit prior to travelling.

SUGGESTED READING

The following references are available at the library of the Arctic Biological Station, Department of Fisheries and Oceans, Ste. Anne de Bellevue, Québec. They provide information on polar bears, arctic travel and survival techniques.

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